Complete Summary

GUIDELINE TITLE

Breast cancer screening.

BIBLIOGRAPHIC SOURCE(S)

Kaiser Permanente Southern California. Breast cancer screening. Pasadena (CA): Kaiser Permanente Southern California; 2003 Apr. 4 p.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Breast cancer

GUIDELINE CATEGORY

Screening

CLINICAL SPECIALTY

Family Practice
Internal Medicine
Obstetrics and Gynecology
Radiology

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

To assist physicians and other health care professionals in counseling women on the benefits and harms of breast cancer mammography screening with or without clinical breast examination (CBE)

TARGET POPULATION

- Asymptomatic women of all ages (by groups: under 40 years, 40 to 49 years, 50 to 69 years, 70 to 74 years, and 75 yrs and older) with no risk factors
- Asymptomatic women of any age with selected risk factors

INTERVENTIONS AND PRACTICES CONSIDERED

1. Mammography
2. Clinical breast examination
3. Breast self-examination

MAJOR OUTCOMES CONSIDERED

Overall: Mortality and Morbidity Associated with Breast Cancer

Specific to mammographic screening:

- Risk of developing breast cancer in a 10-year period
- Accuracy of screening test (sensitivity and specificity at first exam)
- Benefits
    - Chance of dying from a breast cancer that develops in a 10-year period
    - Breast cancer deaths prevented per 1,000 women screened over a 10-year period
- Harms
    - Chance of a false-positive test result rate after 5 exams
    - Chance of a false-negative test result rate
    - Number of clinical and mammography examinations involving inconvenience, anxiety, and/or discomfort
    - Percent of women experiencing symptoms from mammography, including pain, discomfort, and anxiety from abnormal result

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

An evidence search was performed to update the search of the Interregional Guidelines Steering Group (IRGSG)-approved guideline on Breast Cancer Screening (2001). The search was limited to systematic reviews and individual

randomized controlled trials (RCTs) that reported the effect of mammography screening (with or without clinical breast examination) vs. no mammography screening on breast cancer mortality.

The search strategies presented below addressed mammography for asymptomatic women with no risk factors. For the search strategies used to address mammography for asymptomatic women with risk factors, breast self-examination, and clinical breast examination refer to the technical companion document (refer to the "Availability of Companion Documents" field).

Clinical Evidence (Issue 8, March 2003, online version):

Strategy

- Search terms: "breast cancer" OR "breast neoplasm" via on-line search field
- Time period: not applied
- Publication types: systematic reviews
- Other limits: titles and text search

Results

- Total number of citations obtained: 33
- Final number included in the evidence table: 0

Cochrane Database of Systematic Reviews (1st quarter, 2003):

Strategy

- Search terms: ("breast neoplasms" OR "breast cancer") AND ("mammography" OR "mammogram" OR "clinical breast examination" OR "CBE" OR "clinical examination") AND "screening"
- Time period: not applied
- Publication types: systematic reviews
- Other limits: none

Results

- Total number of citations obtained: 11
- Final number of studies included in the evidence table: 0

PubMed (Meta-analysis):

Strategy

- Search terms: (((((("breast neoplasms"[Medical Subject Heading (MeSH)] OR "breast cancer"[text]) AND ((("clinical breast examination"[text] OR "CBE"[text]) OR "physical examination"[MeSH]) OR "mammography"[MeSH])) AND ("mass screening"[MeSH] OR "screening"[text]))
- Time period: October 1, 2000 - March 6, 2003
- Publication types: Meta-analysis
- Other limits: All adults 19+ years, human

Results

- Total number of citations obtained: 7
- Final number of studies included in the evidence table: 1

PubMed (randomized controlled trials, RCTs)

Strategy

- Search terms: (((((("breast neoplasms"[MeSH] OR "breast cancer"[text]) AND ((("clinical breast examination"[text] OR "CBE"[text]) OR "physical examination"[MeSH]) OR "mammography"[MeSH])) AND ("mass screening"[MeSH] OR "screening"[text]))
- Time period: October 1, 2000 - March 6, 2003
- Publication types: RCTs
- Other limits: All adults 19+ years, human

Results

- Total number of citations obtained: 30
- Final number of studies included in the evidence table: 0 (all relevant studies were included in the meta-analysis/systematic review cited above)

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus (Committee)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not applicable

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The recommendations issued in this guideline were approved by the Southern California Permanente Medical Group Chiefs of Service for Family Practice, Internal Medicine, Obstetrics and Gynecology and Radiology, and the Regional Breast Cancer Committee.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Mammography Screening

Mammography for Asymptomatic Women with No Risk Factors for Breast Cancer*

Inform asymptomatic women aged 40 to 49 of the benefits and harms of mammography screening, and offer screening at least every two years. Encourage these women to make a personal decision, in collaboration with their physician, about whether to be screened. (Evidence based)

Recommend mammography screening at least every two years for asymptomatic women aged 50 to 69. (Evidence based)

There is insufficient evidence to recommend for or against mammography screening for asymptomatic women aged 70 to 74. (Evidence based)

Inform asymptomatic women aged 70 to 74 of the benefits and harms of mammography screening. Encourage these women to make a personal decision, in collaboration with their physician, about whether to be screened and how frequently. (Consensus based)

Inform asymptomatic women aged 75 and older that there are no studies on the benefits and harms of mammography screening in this age group. Encourage these women to make a personal decision, in collaboration with their physician, about whether to be screened and how frequently. (Consensus based)

Routine mammography screening is not recommended for asymptomatic women under age 40. (Consensus based)

*Selected Risk Factors:

- Personal history of breast cancer (including ductal carcinoma in situ)
- Breast biopsy showing atypical hyperplasia, lobular neoplasia (lobular carcinoma in situ), or histology unknown
- Mother or sister diagnosed with breast cancer at age 50 or older
- Mother, sister, or daughter diagnosed with breast cancer before age 50
- Women with a blood relative who has previously been tested and found to have a confirmed, clinically significant alteration in a breast cancer (BRCA) gene associated with increased risk for the development of breast cancer

Annual mammography screening is recommended for women with the following selected risk factors. (Consensus based)

- Personal history of breast cancer (including ductal carcinoma in situ): begin screening after diagnosis
- Breast biopsy showing atypical hyperplasia, lobular neoplasia (lobular carcinoma in situ), or histology unknown: begin screening after diagnosis
- Mother or sister diagnosed with breast cancer at age 50 or older: begin screening at age 40
- Mother, sister, or daughter diagnosed with breast cancer before age 50: begin screening at age 35
- Women with a blood relative who has previously been tested and found to have a confirmed, clinically significant alteration in a BRCA gene associated with increased risk for the development of breast cancer: begin screening after documentation of the genetic alteration in the patient at or after age 18

Breast Self-Examination

Inform women of the lack of benefit and the potential harms of breast self-examination. Encourage women to make a personal decision, in collaboration with their physician, about whether to perform breast self-examination and how frequently. (Consensus based)

Counsel all women to seek immediate medical attention upon detection of a breast lump. (Consensus based)

Clinical Breast Examination

Inform women of the lack of evidence of a benefit or harm of routine clinical breast examination (CBE) alone. (Consensus based)

Encourage women to make a personal decision, in collaboration with their health care provider, about whether to have CBE performed. (Consensus based)

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The systematic review and meta-analysis performed for the U.S. Preventive Services Task Force (Humphrey LL, Helfand M, Chan BKS. Breast cancer screening with mammography. A summary of the evidence for the U.S. Preventive Services Task Force. Ann Intern Med 2002 Sep 3;137(5):347-67) was the primary evidence source for all recommendations in this guideline.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

The effectiveness of screening tests in reducing mortality from breast cancer varies by the type of test and a woman's age.

Mammography

Women aged 50 to 69, no selected risk factors – Mammography is most sensitive (ranging from 81 to 98%), and offers the greatest survival benefit among women aged 50 to 69. Meta-analyses of seven large randomized controlled trials of mammography screening found a statistically significant relative reduction of approximately 22% (0.78, 95% confidence interval [CI] 0.70–0.87) in mortality risk in screened vs. unscreened women in this age group.

POTENTIAL HARMS

Mammography

Women aged 50 to 69, no selected risk factors: The positive predictive value of an abnormal screening mammogram is 10 to 15% for women over the age of 50 who have average risk of breast cancer. It is estimated that approximately 24% of women who begin biennial screening mammography at age 50 will have at least one false-positive mammogram within a 10-year screening period. The sensitivity of screening mammography in women over 50 is approximately 90%. With this level of performance, 10% of women with breast cancer may be falsely reassured by a false-negative mammogram result.

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- The recommendations in this guideline are for informational purposes only. They are not intended or designed as a substitute for the reasonable exercise of independent clinical judgment by practitioners, considering each patient´s needs on an individual basis. Guideline recommendations apply to populations of patients. Clinical judgment is necessary to design treatment plans for individual patients.

- This clinical practice guideline is designed to assist clinicians by providing an analytical framework for the evaluation and treatment of the more common problems of patients. They are not intended to replace a clinician's judgment or to establish a protocol for all patients with a particular condition.
- It is understood that some patients will not fit the clinical conditions delineated within this guideline, and that a clinical practice guideline will rarely establish the only appropriate approach to a problem. Deviations from guidelines are appropriate in specific cases, yet exceptions to the guidelines should be infrequent when there is strong direct medical evidence closely linked to health outcomes. In more controversial clinical subjects with weaker or indirect evidence, occasional exceptions are appropriate and anticipated.
- The recommendations in this guideline are not intended as standards for utilization management or performance. Providers are responsible for applying recommendations to the specific clinical characteristics of each patient. In all clinical situations, Kaiser Permanente physicians have authority and autonomy in planning and directing the care of patients.
- It should be noted that, while great care has been taken to ensure the accuracy of the information presented, the reader is advised that the authors, editors, reviewers, and contributors cannot be responsible for continued currency of the information, for any errors or omissions, or for any consequences arising therefrom.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Kaiser Permanente Southern California. Breast cancer screening. Pasadena (CA): Kaiser Permanente Southern California; 2003 Apr. 4 p.

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1993 (revised 2003 Apr)

GUIDELINE DEVELOPER(S)

Kaiser Permanente-Southern California - Managed Care Organization

SOURCE(S) OF FUNDING

Kaiser Permanente Southern California

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Breast Cancer Screening Guideline Development Team

Southern California Permanente Medical Group

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

ENDORSER(S)

Kaiser Permanente Interregional Guidelines Steering Group
Southern California Permanente Medical Group

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Kaiser Permanente Southern California. Breast cancer screening. Pasadena (CA): Kaiser Permanente Southern California; 2001 Apr. 4 p.

GUIDELINE AVAILABILITY

Electronic and print copies available from: Marguerite Koster, Kaiser Permanente Southern California, Department of Clinical Analysis, 393 E. Walnut St, 6th Floor, Pasadena, CA 91108. E-mail: marguerite.a.koster@kp.org.

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Breast cancer screening guideline. Pasadena (CA): Kaiser Permanente Southern California, 2003 Sep. 43 p.

Electronic and print copies available from: Marguerite Koster, Kaiser Permanente Southern California, Department of Clinical Analysis, 393 E. Walnut St, 6th Floor, Pasadena, CA 91108. E-mail: marguerite.a.koster@kp.org.

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on December 11, 2001. The information was verified by the guideline developer as of January 18, 2002. This summary was updated by ECRI on June 7, 2004.

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